16x1   #18

1638   ENTERED

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RAW SEQUENCE LISTING   DATE: 05/07/2002 P16
PATENT APPLICATION: US/09/665,308D   TIME: 09:41:28

Input Set : A:\BB1149USNA 3rd Corrected Seq List.txt
Output Set: N:\CRF3\05072002\I665308D.raw

```
 3 <110> APPLICANT: Cahoon, Rebecca E.
 4        Klein, Theodore M.
 5        Odell, Joan T.
 6        Orozco, Emil M. Jr.
 8 <120> TITLE OF INVENTION: PLANT CELL CYCLIN GENES
10 <130> FILE REFERENCE: BB1149 US NA
12 <140> CURRENT APPLICATION NUMBER: 09/665,308D
13 <141> CURRENT FILING DATE: 2002-04-25
15 <150> PRIOR APPLICATION NUMBER: 60/078,735
16 <151> PRIOR FILING DATE: 1998-03-20
18 <150> PRIOR APPLICATION NUMBER: PCT/US99/06047
19 <151> PRIOR FILING DATE: 1999-03-19
21 <160> NUMBER OF SEQ ID NOS: 32
23 <170> SOFTWARE: MICROSOFT OFFICE 97
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 1071
27 <212> TYPE: DNA
28 <213> ORGANISM: Zea mays
30 <400> SEQUENCE: 1
31 ccggaattcc cggggtcgac ccacgcgtcc ggccgcgcgc cgtggcgccc gccgacctcc   60
32 agctctccgg gtcctacgcc tccgacatct acacctacct ccgctccctg gaggtggatc  120
33 cgcagcggcg gtccagatcc gattacatcg aggcggtgca ggcggacgtc acggcccaca  180
34 tgcggagcat cctcgtcgac tggctcgtcg aggtcgccga ggagtacaag ctcgtcgcgg  240
35 acacgctcta cctcaccatc tcttatgtcg accgcttcct ctccgtcaac gcgctcggcc  300
36 gtgacaagct gcagctcctt ggcgttgcct ccatgctcat tgccgcgaag ttcgaggaga  360
37 tcagcccgcc gcacccggag gacttctgct acatcacaga caacacctac accaaagagg  420
38 agctcctcaa gatggagagc gacatactca agcttctcaa gttcgagttg ggcaatccta  480
39 caatcaagac cttcctgaga cgtttcataa gatctgccca tgaagacaag aagggctcca  540
40 tcttgttaat ggaattcttg gggagctacc tcgctgagct gagtctacta gattatggct  600
41 gcctccggtt cttgccatca gtagttgctg cttcagtcat gtttgttgct aggcctgaca  660
42 ttgatccaaa taccaatccg tggaacacaa agctgcagaa gatgactggc tacaaagttt  720
43 ctgaactcaa ggattgcatc gtagccatac atgacttgca gctcaacagg aaatgtccat  780
44 cattaacggc aattcgagac aagtacaagc agcacaagtt caaatgcgtg tcattgatcc  840
45 tcgtgcctgt cgtgatccct acttcatact ttgaagactt agctgagtag ctgctctcgg  900
46 actgtaccgc tgtaaggcta acaatctgag ctctccttga gctcttaggg acaagcagaa  960
47 aataaccgtt tgatgagctt cctctcatt taagtagcgt ggtgaaagct atttgtttga 1020
48 ggttctttag gattaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a          1071
50 <210> SEQ ID NO: 2
51 <211> LENGTH: 295
52 <212> TYPE: PRT
53 <213> ORGANISM: Zea mays
55 <400> SEQUENCE: 2
56 Gly Ile Pro Gly Val Asp Pro Arg Val Arg Pro Arg Ala Val Ala Pro
```

RAW SEQUENCE LISTING   DATE: 05/07/2002
PATENT APPLICATION: US/09/665,308D   TIME: 09:41:28

Input Set : A:\BB1149USNA 3rd Corrected Seq List.txt
Output Set: N:\CRF3\05072002\I665308D.raw

```
57 1                   5                   10                  15
59 Ala Asp Leu Gln Leu Ser Gly Ser Tyr Ala Ser Asp Ile Tyr Thr Tyr
60           20                  25                  30
62 Leu Arg Ser Leu Glu Val Asp Pro Gln Arg Arg Ser Arg Ser Asp Tyr
63           35                  40                  45
65 Ile Glu Ala Val Gln Ala Asp Val Thr Ala His Met Arg Ser Ile Leu
66      50                  55                  60
68 Val Asp Trp Leu Val Glu Val Ala Glu Glu Tyr Lys Leu Val Ala Asp
69 65                  70                  75                  80
71 Thr Leu Tyr Leu Thr Ile Ser Tyr Val Asp Arg Phe Leu Ser Val Asn
72           85                  90                  95
74 Ala Leu Gly Arg Asp Lys Leu Gln Leu Leu Gly Val Ala Ser Met Leu
75           100                 105                 110
77 Ile Ala Ala Lys Phe Glu Glu Ile Ser Pro Pro His Pro Glu Asp Phe
78           115                 120                 125
80 Cys Tyr Ile Thr Asp Asn Thr Tyr Thr Lys Glu Glu Leu Leu Lys Met
81      130                 135                 140
83 Glu Ser Asp Ile Leu Lys Leu Leu Lys Phe Glu Leu Gly Asn Pro Thr
84 145                 150                 155                 160
86 Ile Lys Thr Phe Leu Arg Arg Phe Ile Arg Ser Ala His Glu Asp Lys
87           165                 170                 175
89 Lys Gly Ser Ile Leu Leu Met Glu Phe Leu Gly Ser Tyr Leu Ala Glu
90           180                 185                 190
92 Leu Ser Leu Leu Asp Tyr Gly Cys Leu Arg Phe Leu Pro Ser Val Val
93           195                 200                 205
95 Ala Ala Ser Val Met Phe Val Ala Arg Pro Asp Ile Asp Pro Asn Thr
96      210                 215                 220
98 Asn Pro Trp Asn Thr Lys Leu Gln Lys Met Thr Gly Tyr Lys Val Ser
99 225                 230                 235                 240
101 Glu Leu Lys Asp Cys Ile Val Ala Ile His Asp Leu Gln Leu Asn Arg
102                 245                 250                 255
104 Lys Cys Pro Ser Leu Thr Ala Ile Arg Asp Lys Tyr Lys Gln His Lys
105           260                 265                 270
107 Phe Lys Cys Val Ser Leu Ile Leu Val Pro Val Val Ile Pro Thr Ser
108           275                 280                 285
110 Tyr Phe Glu Asp Leu Ala Glu
111      290                 295
113 <210> SEQ ID NO: 3
114 <211> LENGTH: 435
115 <212> TYPE: DNA
116 <213> ORGANISM: Glycine max
118 <220> FEATURE:
119 <221> NAME/KEY: unsure
120 <222> LOCATION: (1)
121 <223> OTHER INFORMATION: n = A, C, G or T
123 <220> FEATURE:
124 <221> NAME/KEY: unsure
125 <222> LOCATION: (86)
126 <223> OTHER INFORMATION: n = A, C, G or T
```

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```
128 <220> FEATURE:
129 <221> NAME/KEY: unsure
130 <222> LOCATION: (88)
131 <223> OTHER INFORMATION: n = A, C, G or T
133 <220> FEATURE:
134 <221> NAME/KEY: unsure
135 <222> LOCATION: (216)..(217)
136 <223> OTHER INFORMATION: n = A, C, G or T
138 <220> FEATURE:
139 <221> NAME/KEY: unsure
140 <222> LOCATION: (231)
141 <223> OTHER INFORMATION: n = A, C, G or T
143 <220> FEATURE:
144 <221> NAME/KEY: unsure
145 <222> LOCATION: (240)
146 <223> OTHER INFORMATION: n = A, C, G or T
148 <220> FEATURE:
149 <221> NAME/KEY: unsure
150 <222> LOCATION: (307)
151 <223> OTHER INFORMATION: n = A, C, G or T
153 <220> FEATURE:
154 <221> NAME/KEY: unsure
155 <222> LOCATION: (372)
156 <223> OTHER INFORMATION: n = A, C, G or T
158 <220> FEATURE:
159 <221> NAME/KEY: unsure
160 <222> LOCATION: (377)
161 <223> OTHER INFORMATION: n = A, C, G or T
163 <220> FEATURE:
164 <221> NAME/KEY: unsure
165 <222> LOCATION: (427)
166 <223> OTHER INFORMATION: n = A, C, G or T
168 <400> SEQUENCE: 3
```

```
W--> 169 nactccatct tcttccatcc atttcctctt tctcgatctg ttccaaattc acttcacaca  60
W--> 170 caggaaagaa gatggagact cgcgcngncg caaagagaaa ggcaaatgcc gccaccatag 120
     171 tctttgtcga aaacaatac cccaacaaga ggcagcgggt tgtgttgggt gaacttccca 180
W--> 172 atttacaaaa ccttattgtc tccgaaactc aaaatnngcg caaagagaag ntcctatgtn 240
     173 ggaagaatcc caatgagaag aaaccatcac ccacaaacaa caacacctt ccttccctc 300
W--> 174 agatcancga atcttatgat tcggatatcc acgggtatct tcgtgaaatg gagatgcaga 360
W--> 175 ataagagaag ancaatngtt gatacattga aaaggttaga aaatcgttac ccaaccatgg 420
W--> 176 agcaatntgg tgatt                                                  435
```

```
178 <210> SEQ ID NO: 4
179 <211> LENGTH: 110
180 <212> TYPE: PRT
181 <213> ORGANISM: Glycine max
183 <220> FEATURE:
184 <221> NAME/KEY: UNSURE
185 <222> LOCATION: (6)
186 <223> OTHER INFORMATION: Xaa = ANY AMINO ACID
```

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     188 <220> FEATURE:
     189 <221> NAME/KEY: UNSURE
     190 <222> LOCATION: (49)
     191 <223> OTHER INFORMATION: Xaa = ANY AMINO ACID
     193 <220> FEATURE:
     194 <221> NAME/KEY: UNSURE
     195 <222> LOCATION: (54)
     196 <223> OTHER INFORMATION: Xaa = ANY AMINO ACID
     198 <220> FEATURE:
     199 <221> NAME/KEY: UNSURE
     200 <222> LOCATION: (57)
     201 <223> OTHER INFORMATION: Xaa = ANY AMINO ACID
     203 <220> FEATURE:
     204 <221> NAME/KEY: UNSURE
     205 <222> LOCATION: (79)
     206 <223> OTHER INFORMATION: Xaa = ANY AMINO ACID
     208 <220> FEATURE:
     209 <221> NAME/KEY: UNSURE
     210 <222> LOCATION: (101)..(102)
     211 <223> OTHER INFORMATION: Xaa = ANY AMINO ACID
     213 <400> SEQUENCE: 4
N--> 214 Met Glu Thr Arg Ala Xaa Ala Lys Arg Lys Ala Asn Ala Ala Thr Ile
     215 1               5                  10                  15
     217 Val Phe Val Glu Lys Gln Tyr Pro Asn Lys Arg Gln Arg Val Val Leu
     218             20                  25                  30
     220 Gly Glu Leu Pro Asn Leu Gln Asn Leu Ile Val Ser Glu Thr Gln Asn
     221         35                  40                  45
N--> 223 Xaa Arg Lys Glu Lys Xaa Leu Cys Xaa Lys Asn Pro Asn Glu Lys Lys
     224     50                  55                  60
N--> 226 Pro Ser Pro Thr Asn Asn Asn Thr Phe Pro Ser Pro Gln Ile Xaa Glu
     227 65                  70                  75                  80
     229 Ser Tyr Asp Ser Asp Ile His Gly Tyr Leu Arg Glu Met Glu Met Gln
     230             85                  90                  95
N--> 232 Asn Lys Arg Arg Xaa Xaa Val Asp Thr Leu Lys Arg Leu Glu
     233             100                 105                 110
     235 <210> SEQ ID NO: 5
     236 <211> LENGTH: 847
     237 <212> TYPE: DNA
     238 <213> ORGANISM: Triticum aestivum
     240 <220> FEATURE:
     241 <221> NAME/KEY: unsure
     242 <222> LOCATION: (584)
     243 <223> OTHER INFORMATION: n = A, C, G or T
     245 <220> FEATURE:
     246 <221> NAME/KEY: unsure
     247 <222> LOCATION: (686)
     248 <223> OTHER INFORMATION: n = A, C, G or T
     250 <220> FEATURE:
     251 <221> NAME/KEY: unsure
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252 <222> LOCATION: (704)
253 <223> OTHER INFORMATION: n = A, C, G or T
255 <220> FEATURE:
256 <221> NAME/KEY: unsure
257 <222> LOCATION: (731)
258 <223> OTHER INFORMATION: n = A, C, G or T
260 <220> FEATURE:
261 <221> NAME/KEY: unsure
262 <222> LOCATION: (748)
263 <223> OTHER INFORMATION: n = A, C, G or T
265 <220> FEATURE:
266 <221> NAME/KEY: unsure
267 <222> LOCATION: (768)
268 <223> OTHER INFORMATION: n = A, C, G or T
270 <220> FEATURE:
271 <221> NAME/KEY: unsure
272 <222> LOCATION: (772)
273 <223> OTHER INFORMATION: n = A, C, G or T
275 <220> FEATURE:
276 <221> NAME/KEY: unsure
277 <222> LOCATION: (781)
278 <223> OTHER INFORMATION: n = A, C, G or T
280 <220> FEATURE:
281 <221> NAME/KEY: unsure
282 <222> LOCATION: (785)
283 <223> OTHER INFORMATION: n = A, C, G or T
285 <220> FEATURE:
286 <221> NAME/KEY: unsure
287 <222> LOCATION: (803)
288 <223> OTHER INFORMATION: n = A, C, G or T
290 <220> FEATURE:
291 <221> NAME/KEY: unsure
292 <222> LOCATION: (806)..(807)
293 <223> OTHER INFORMATION: n = A, C, G or T
295 <220> FEATURE:
296 <221> NAME/KEY: unsure
297 <222> LOCATION: (819)
298 <223> OTHER INFORMATION: n = A, C, G or T
300 <220> FEATURE:
301 <221> NAME/KEY: unsure
302 <222> LOCATION: (825)
303 <223> OTHER INFORMATION: n = A, C, G or T
305 <220> FEATURE:
306 <221> NAME/KEY: unsure
307 <222> LOCATION: (830)
308 <223> OTHER INFORMATION: n = A, C, G or T
310 <220> FEATURE:
311 <221> NAME/KEY: unsure
312 <222> LOCATION: (839)
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/07/2002
PATENT APPLICATION: US/09/665,308D   TIME: 09:41:29

Input Set : A:\BB1149USNA 3rd Corrected Seq List.txt
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 1,86,88,216,217,231,240,307,372,377,427
Seq#:4; Xaa Pos. 6,49,54,57,79,101,102
Seq#:5; N Pos. 584,686,704,731,748,768,772,781,785,803,806,807,819,825,830
Seq#:5; N Pos. 839
Seq#:6; Xaa Pos. 195
Seq#:7; N Pos. 924,958,971,972,996
Seq#:8; Xaa Pos. 227
Seq#:9; N Pos. 424,441
Seq#:15; N Pos. 499,515,516,558
Seq#:16; Xaa Pos. 68
Seq#:17; N Pos. 8,26,159
Seq#:19; N Pos. 88,130,251,311,352,359,394,400,408,410,415,420,426,432,433
Seq#:19; N Pos. 448,457,461,462,470,475
Seq#:20; Xaa Pos. 26,40,100
Seq#:22; Xaa Pos. 28,95,138
Seq#:23; N Pos. 1126
Seq#:25; N Pos. 527,561,640,643
Seq#:26; Xaa Pos. 137,149,175,176

VERIFICATION SUMMARY   DATE: 05/07/2002
PATENT APPLICATION: US/09/665,308D   TIME: 09:41:29

Input Set : A:\BB1149USNA 3rd Corrected Seq List.txt
Output Set: N:\CRF3\05072002\I665308D.raw

```
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:170 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:60
L:172 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:180
L:174 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:300
L:175 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:360
L:176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:420
L:214 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:223 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:48
L:226 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:64
L:232 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:96
L:325 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:540
L:327 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:660
L:328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:720
L:329 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:780
L:379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:192
L:426 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:900
L:427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:960
L:482 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:224
L:508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:420
L:806 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:480
L:807 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:540
L:832 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:64
L:856 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:858 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:120
L:1073 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:60
L:1074 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:120
L:1076 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:240
L:1077 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:300
L:1078 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:360
L:1079 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:420
L:1103 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:20
L:1107 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:16
L:1110 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:32
L:1122 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:96
L:1170 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:16
L:1182 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:80
L:1191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:128
L:1274 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:1080
L:1376 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:480
L:1377 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:540
L:1378 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:600
L:1402 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:26
L:1427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:128
L:1430 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:144
L:1433 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:160
```